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ABSTRACT

To determine if people who wrote legal documents could read such documents with understanding and rewrite them to be understandable to the general public, eight experienced government writers were asked to rewrite a portion of a government regulation for a general audience. The writers--four lawyers and four nonlawyers--were audio recorded as they revised the document to discover the protocols they were using as they worked. Their revisions were then ranked for comprehensibility. The two writers of the revisions rated highest had the following characteristics in common: (1) they were both lawyers, (2) they were the only writers who stated that they felt confident they had understood the regulation and that they had generated a satisfactory revision, (3) they were the only writers who read the passage completely through before attempting any revision, (4) they were very concerned with the appearance of the regulation, (5) they interpreted the task of revision broadly, (6) their editing protocols were laced with references to writing rules, (7) they were in touch with their audience, and (8) they were the only writers to reread their revisions. In contrast, the writers of the revisions rated poorest did not realize the needs of their audience. In addition, they misunderstood important aspects of the regulation and they interpreted the instructions for revision in a very narrow sense. (Guidelines for revision based on the findings are included.) (FL)

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Technical Report No. 8

Translating the Law Into Common Language: A Protocol Study

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John R. Hayes
Linda S. Flower

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TRANSLATING THE LAW INTO COMMON LANGUAGE:

A PROTOCOL STUDY

Sandra J. Bond, John R. Hayes, and Linda S. Flower

April, 1980

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ABOUT THE DOCUMENT DESIGN PROJECT

In September 1978, the American Institutes for Research, Carnegie-Mellon University and Siegel & Gale, Inc., began the Document Design Project to foster clear and simple writing and design of public documents. The purpose of the Document Design Project is to help make forms, regulations, brochures, and other written materials easier for people to read, to understand, and to use. Funding for the project comes from the Teaching and Learning/Reading and Language group at the National Institute of Education.

The Project's goal is to increase the knowledge and skills of people who produce public documents. To accomplish this goal, the Document Design Project is

- conducting theoretical and applied research studies on language comprehension, on the ways in which skilled and unskilled writers work, and on problems associated with different document features;
- working directly with government and private agencies as they produce materials for public use;
- developing courses on writing and design for graduate students and undergraduates.

This report is one of a series of technical and explanatory papers resulting from our research.

If you have questions or comments on this report or on other work of the Document Design Project, contact Dr. Janice C. Redish, Director, The Document Design Project, AIR, (202) 342-5071, or Dr. Lee W. Gregg, Department of Psychology, CMU, (412) 578-2781.

TABLE OF CONTENTS

The Task	1
Rating and Ranking the Revisions	2
How Expert Do You Have To Be To Understand a Federal Regulation?	6
Difficulties in Revising Regulations	7
What the Better Writers Did	10
What the Poorer Writers Did	13
The Trouble with Regulations and Regulation Writing	14
Guidelines for Revising	15
Conclusions	18
References	20

List of Figures

Figure 1:	The Advance Payments Subsection, as it Originally Appeared in the Federal Register.	2
Figure 2:	The Advance Payments Subsection Isolated from the Original.	3
Figure 3:	One of the Better Revisions.	12
Figure 4:	An Excerpt from the SBA Pamphlet Intended for Disadvantaged Business People.	16

List of Tables

Table 1:	Average Ratings and Rankings of Revisions	6
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Translating the Law into Common Language:

A Protocol Study¹

The language of the law is so unique that it has been given a name--legalese. The name implies complexity, incomprehensibility, obscurity. Although we the people have frequent contact with legal documents--loan applications, traffic tickets, tax forms--most of us have difficulty reading these documents with understanding. But what about the people who write the documents? Can they read them with understanding? Can they rewrite them to be understandable to us, the general public, without sacrificing precision and precedent? And if they can, can we learn something from the process? We decided to find out.

The Task

We asked eight experienced government writers--four lawyers and four non-lawyers--to rewrite a portion of a Small Business Administration regulation for a general audience. This portion, which concerns advance payments to a minority business, was published in the Federal Register, January 25, 1979, exactly as shown in Figure 1, and became law last May. Figure 2 shows the same subsection isolated for easier reading.

¹
Paper presented at Session 23.23, Some Research on Document Design, Annual Meeting of AERA, Boston, Mass., April, 1980.

shall submit to SBA an offer which contains the following information:

(i) Current and complete specifications and drawings as necessary;

(ii) A procuring agency estimate of the current fair market value of the contract documented with supporting calculations;

(iii) Identification of any incumbent small business contractor which is presently performing the same or similar contract requirements with all available information on that business' gross receipts and the volume of Federal contracts previously awarded to and performed by such contractor, when such information is readily available and does not unduly delay the offering of a contract.

(3) *Certification.* SBA's execution of a procurement contract with a procuring agency, will operate as a certification of SBA's competency and responsibility to perform the contract as required by section 8(a)(1) of the Small Business Act.

(4) *Failure to Agree on Terms and Conditions.* In the event that SBA and the procuring agency's contracting officer fail to agree upon the selection of the procurement or the terms and conditions of any prospective contract being negotiated between SBA and the procuring agency, SBA and the procuring agency shall submit information sufficient to facilitate a final decision to the head of the procuring agency, who shall have the responsibility to resolve any such disagreement.

(i) Before submission of any disagreement to the head of the procuring agency, the appropriate SBA Regional Director shall seek resolution of any such disagreement by the contracting officer's supervisor.

(ii) Failure of the appropriate Regional Director and the contracting officer's supervisor to agree will cause the matter to be submitted to the AAMSB-COD, who on behalf of the Administrator of the SBA, shall present the disagreement to the head of the procuring agency for resolution.

(iii) Subsequent to the resolution of any disagreement over the terms and conditions of any proposed contract by the head of the procuring agency, SBA and the procuring agency may reach agreement upon the proposed contract, or SBA may decide that the contract is unsuited to performance by a section 8(a) business concern, and may then return the proposed contract to the procuring agency for other procurement action.

(c) *Negotiation by 8(a) Business Concern.* Whenever practicable, any section 8(a) business concern which has been selected by SBA to perform a section 8(a) subcontract shall participate in the negotiations of the terms and conditions of such contract.

(d) *Impact on Small Business.* The AAMSB-COD and the AA/PA shall make a determination for each section 8(a) subcontract before award that:

(1) No public solicitation has been made on the specific purchase in question; and

(2) No small business, having relied upon Federal purchasing of the item for a significant part of its business during the preceding year, will suffer hardship because of the removal of the procurement from competition.

§ 124.1-3 Advance Payments.

(a) *Definitions.* Advance payments are disbursements of money made by SBA to a section 8(a) business concern prior to the completion of performance of a specific section 8(a) subcontract for the purpose of assisting the said 8(a) business concern in meeting financial requirements pertinent to the performance of said subcontract. Advance payments must be liquidated from proceeds derived from the performance of the specific section 8(a) subcontract. However, this does not preclude repayment of such advance payments from other revenues of the business except from other advance payments. The proceeds derived from the performance of the specific 8(a) contract must be deposited in a bank account established exclusively for the purpose of administering the advance payments.

(b) *General Policy.* Advance payments shall not be made in any case in which the section 8(a) business concern has assigned its rights to receive any payment under the specific section 8(a) subcontract to any person or entity, unless such assignment shall be made to SBA or to a Federal agency in regard to the receipt by the 8(a) business concern of a progress payment for any specific 8(a) subcontract. In no event shall the total amount of advance payments for a Section 8(a) business concern exceed the amount of the 8(a) subcontract to which it relates; nor shall any such advance payment exceed the amount which is to be earned from the anticipated completion of performance of the remainder of the subject 8(a) subcontract. The SBA shall not charge interest on advance payments disbursed pursuant to these regulations.

(c) *Requirements.* (1) Advance payments may be approved for a Section 8(a) business concern when the following conditions are found by SBA to exist:

(i) A Section 8(a) business concern does not have adequate working capital to perform a specific Section 8(a) subcontract; and

(ii) Either adequate and timely financing is not available on reasonable terms to provide the necessary capital, or financing is available but the terms

of such financing are not conducive to the effective performance of the Section 8(a) subcontract and/or the business development purposes of the Section 8(a) program.

(iii) The Section 8(a) business concern has established or agrees to establish and maintain financial records and controls which provide for complete accountability and required reporting of program funds. These records must be made available upon request for review by SBA and the General Accounting Office.

(d) *Procedure.* To be eligible to receive Advance Payments a Section 8(a) business concern must meet the conditions set forth in § 124.1-3(c) above and must comply with the following procedure.

(1) A Section 8(a) business concern desiring to receive an advance payment in connection with any Section 8(a) subcontract shall:

(i) Submit a written request for advance payment to the appropriate SBA regional director or his designee. Such request must include detailed documentation supporting the need for such funds and evidence that working capital financing cannot be found upon terms acceptable under § 124.1-3(c)(ii) above from financial institutions.

(ii) The Section 8(a) business concern must select a commercial bank which is a member of the Federal Reserve System in which it must establish a Special Bank Account for deposit of advance payment funds from SBA and for the deposit of payments earned pursuant to the performance of the subcontract(s). This special account shall be a demand deposit account.

(A) Disbursements from the account shall require the countersignature of such SBA employee as shall be designated by the appropriate regional director.

(B) Under no circumstances shall the requirement for an SBA employee countersignature be waived.

(C) SBA shall obtain a lien upon Special Bank Account, any property contracted for, and supplies, materials and other property acquired with proceeds of such advance payments.

(2) Upon a review of all the circumstances and evidence, the Regional Director shall have the obligation to decide whether to approve or deny request for advance payment. The right of approval by the Regional Director shall not be delegated to any other person or entity. The 8(a) business concern, the bank selected pursuant to § 124.1-3(d)(ii) above, and SBA shall execute an Advance Payment agreement which shall set forth terms and conditions governing advance payments.

§ 124.1-3 Advance Payments.

(a) *Definitions.* Advance payments are disbursements of money made by SBA to a section 8(a) business concern prior to the completion of performance of a specific section 8(a) subcontract for the purpose of assisting the said 8(a) business concern in meeting financial requirements pertinent to the performance of said subcontract. Advance payments must be liquidated from proceeds derived from the performance of the specific section 8(a) subcontract. However, this does not preclude repayment of such advance payments from other revenues of the business except from other advance payments. The proceeds derived from the performance of the specific 8(a) contract must be deposited in a bank account established exclusively for the purpose of administering the advance payments.

(b) *General Policy:* Advance payments shall not be made in any case in which the section 8(a) business concern has assigned its rights to receive any payment under the specific section 8(a) subcontract to any person or entity, unless such assignment shall be made to SBA or to a Federal agency in regard to the receipt by the 8(a) business concern of a progress payment for any specific 8(a) subcontract. In no event shall the total amount of advance payments for a Section 8(a) business concern exceed the amount of the 8(a) subcontract to which it relates; nor shall any such advance payment exceed the amount which is to be earned from the anticipated completion of performance of the remainder of the subject 8(a) subcontract. The SBA shall not charge interest on advance payments disbursed pursuant to these regulations.

(c) *Requirements.* (1) Advance payments may be approved for a Section 8(a) business concern when the following conditions are found by SBA to exist:

(i) A Section 8(a) business concern does not have adequate working capital to perform a specific Section 8(a) subcontract; and

(ii) Either adequate and timely financing is not available on reasonable terms to provide the necessary capital, or financing is available but the terms of such financing are not conducive to the effective performance of the Section 8(a) subcontract and/or the business development purposes of the Section 8(a) program.

(iii) The Section 8(a) business concern has established or agrees to establish and maintain financial records and controls which provide for complete accountability and required reporting of program funds. These records must be made available upon request for review by SBA and the General Accounting Office.

**Figure 2: The Advance Payments Subsection
Isolated from the Original.**

We used only part of a regulation because we thought revising an entire regulation in the amount of time we could reasonably expect people to spend--one hour--would not be feasible. We decided on this particular subsection because it exists as law (and indeed is rather recent), because it is short enough to be workable in the time constraint, and because it is a fine example of impenetrable legal style.

Each writer worked independently and was given the following instructions:

We would like to collect a verbal protocol of an experienced writer revising a portion of a federal regulation for the general public. A verbal protocol is a tape recorded record of someone attempting to perform a task. Since we will be looking not just at your revision but at the thought processes you use to produce it, we want you to say everything out loud. This includes any reading or writing you may do. If you are reading, say, 'I'm reading so-and-so.' If you are writing, say, 'I'm writing down the following.' We would like you to read this particular subsection, explaining what it means as you go along. Rewrite and reorganize it in any way you feel is necessary to make it more understandable for a general audience. Remember--everything out loud.

The tapes were later transcribed and matched to each writer's revision. At this point, we noticed that two of the writers had made only minor changes in their revisions, e.g., changing "shall" to "must" and "said" to "this." We revisited these two writers and asked them to repeat the task, this time making certain they understood that they were completely free to revise the passage in any way to make it more understandable for a general audience. One of these writers revised more

substantially the second time. The other refused to repeat the task, stating that he had made all the necessary revisions the first time to make the regulation understandable for a general audience.

Rating and Ranking the Revisions

Each revision was rated for understandability and ranked from best to worst by eight college graduates working at Carnegie-Mellon University. The revisions were typed and presented to them in different random orders. Three writers had completed only partial revisions. These were not included. We did include a copy of the original regulation to be judged with the revisions. Table 1 shows the ratings for understandability and the average rankings for each version.

The versions rated lowest for understandability and quality are the original regulation and the revision by the writer who refused to repeat the task, insisting that he had already made the regulation more understandable for a general audience. Obviously our raters disagreed.

Table 1

Average Ratings and Rankings of Revisions

<u>Coded Revision</u>	<u>Average Rating for Understandability</u>	<u>Average Ranking</u>
GB	4.13	4.3
ME	3.63	3.8
CV	2.70	2.9
SC	2.63	2.8
RF*	2.30	2.1
TS	2.10	2.1

*RF = the original regulation

Note.--5 is best, 1 is worst.

How Expert Do You Have To Be To Understand a Federal Regulation?

All the writers were concerned about retaining the legal accuracy of the original regulation in their revisions. We were interested in seeing whether the writers possessed the requisite knowledge both for understanding the original regulation and for transforming it into common language. If knowledge of the law is an essential aspect of revising legal documents well--we hypothesize that it is--then the lawyers should have produced better revisions than the non-lawyers. However, Mellinkoff (1978) states, "The first misconception about the clear writing of legal documents is that even if ordinary people don't

understand legal writing at least the lawyers do....Too often, lawyers don't understand it either."

Understanding and revising this particular subsection did indeed prove difficult, even for these "experts." Because we had instructed them to say everything out loud, we were able to tabulate how many times rereading was required for understanding. No one read the passage less than twice, and some writers read some sentences as many as ten times. Even then, some said they weren't convinced they thoroughly understood certain individual sentences. So, how expert do you have to be to understand a federal regulation? So expert, perhaps, that being a lawyer or a regulation writer may not be sufficient. Perhaps we have come to that point at which legal language is so inbred that only the parent agency can fully understand its own child.

Difficulties in Revising Regulations

A major problem for the writers was that key terms--for example, liquidate, progress payment, assign--were not defined within the passage. Some writers supposed that these terms had been defined elsewhere in the regulation. Actually this was almost never the case. One term, "a § 8(a) business concern," had been clarified in an earlier section of the regulation, but the other terms had not. Some writers determined the correct definitions from the context of the passage, but others misdefined words, making the task of producing an accurate

revision difficult if not impossible. This problem might be eased by providing writers with a glossary of legal terms, but it is important to note that two writers who misdefined words never realized that they had done so.

The structure and organization of this subsection were quickly identified by the writers as the standard regulation format. For example, headings are recognizable--"Definitions," "General Policy"--and paragraphs are designated by lower case letters and roman numerals. Indeed, one writer said, "You're given a model to work with--something that's organized in some fashion right here." Unfortunately, that is one of the problems in dealing with a familiar format. The writer assumes that the information fits the format. Actually, this passage is riddled with disorganization and miscues--especially headings and keywords--which, as Swarts, Flower, and Hayes (1980) point out, lead not toward but away from understanding.

For example, the first section is labeled Definitions (plural), but it contains only one definition. In addition to that one definition, it contains some information which in fact belongs elsewhere in the subsection. It also contains information which is repeated elsewhere in the subsection. The writers were immediately cued by the heading to look for more than one definition. When they didn't find them, they reread the section several times to be certain they simply hadn't overlooked them. Next, they had to deal with redundancy and with the

material which was misplaced. This, too, proved problematic for some writers--they were reluctant to reorganize or excise material. In other words, because the format was familiar, the writers were led to expect a particular organization within that format. When they didn't find it, they kept searching the passage to be certain they had not missed something. In this case, then, a familiar structure made revision harder. It appears that the structure of a regulation, while offering a framework which can help, can also handicap a reader if the information within the framework is not well-organized.

Changes suggested by the writers ranged from global to local. Global changes included reorganizing information and generally simplifying the language of the entire passage. Lower level editing included defining terms, e.g., "§ 8(a) business concern"; replacing technical terms with common ones, e.g., "pay back" instead of "liquidate"; and eliminating unnecessary words, e.g., "persons and entities" was shortened by some writers to "persons." Punctuation was changed by most of the writers for consistency and to eliminate ambiguity in conditionals.

Most of the writers recognized the problem of sentence complexity in the regulation, which, according to Redish (1979), "is a much greater barrier to understanding than...technical vocabulary." The first sentence of the General Policy section, described by one of the writers as "long enough to choke a giraffe," was a choice target.

This paper is titled "Translating the Law into Common Language," and an interesting strategy used by the better writers was exactly that--translating and interpreting the regulation as though it were indeed written in another language. For example, one writer read, "The SBA shall not charge interest on--" and then said, "meaning that an advance payment is not a loan." In reading about the progress payment, another writer said, "That's to protect the government....if [it] wants to go after any money, it's got something to go after." Flower and Hayes (1980) have found that people frequently use personal interpretations (scenarios) and familiar examples (instantiations) to aid their understanding of complex material.

What the Better Writers Did

As we had hypothesized, the two revisions rated best were both written by lawyers. These two writers also had the following in common:

1. They were the only two writers who stated they felt confident that they had understood the regulation and that they had generated a revision satisfactory to the task. "I just tried to make clear what an advance payment was from the context of the language, and I think that's been accomplished," one of them said. The other two lawyers also appeared to be on their way to producing good revisions, but unfortunately they did not have time to complete the task. The non-lawyers stated that they had

understood most, if not all, of the regulation, but they were less confident than the lawyers, and indeed some of them made clear errors in interpretation. These results suggest that formal legal training facilitates understanding and revision of legal documents.

2. They were the only writers who read the passage completely through before attempting any revision. This proved to be a good strategy since it allowed them to spot redundancies and disorganization early. The other writers, who plodded through line by line, would spend time carefully revising a sentence only to find that some of the same information was contained in later portions of the passage, or really belonged elsewhere. Then they would have to revise their revision.

3. They were very concerned with the appearance of the regulation--that is, they suggested changes in typeface, column width, spacing, etc., to make the regulation less formidable for the reader. Figure 3 shows one of the better revisions. Compare it to Figure 1, the original regulation. Notice that, just glancing at the two, the revision is less imposing, makes better use of spacing, and is easier on the eyes.

4. They interpreted the task broadly. That is, they systematically dismantled the regulation, changed its organization and wording, and reassembled it in new form. They made their revision decisions, both local and global, quickly and surely, even if they weren't certain they were right in detail.

§ 124.1-3 Advance Payments.

(a) General Policy. SBA may make advance payments without interest to a section 8(a) business to help it meet its financial needs in performing a section 8(a) subcontract, even though it has not completed that subcontract. SBA may approve an advance payment when the business--

- (1) Does not have enough working capital to complete the subcontract;
- (2) Is not able to obtain the needed financing on reasonable terms;
- (3) Sets up or agrees to set up and maintain a system of financial records for reporting of program funds and which permits audit by SBA and the General Accounting Office; and
- (4) Agrees to keep a separate bank account for the advance payments on the subcontract and to deposit all proceeds received under the subcontract in that account.

(b) Limit on amount of advance payments. The total amount of advance payments to a section 8(a) business may not be more than the amount of the subcontract. No advance payment may be more than the remaining unpaid amount of the subcontract.

(c) Payment under an assignment. SBA will not make any advance payment to a third party which has received an assignment from the section 8(a) business, except for a payment to SBA or another Federal agency.

(d) Repayment of advance payments. A business which has received an advance payment on a subcontract must repay it out of the proceeds received under the subcontract. The business may also make repayments out of general business income other than advance payments on different subcontracts.

Figure 3: One of the Better Revisions.

One stated, "If that's not right that can be refined later."
They seemed to realize that indecisiveness would prevent
completing the task.

5. Their protocols are laced with references to writing rules of thumb, e.g., use of active voice, positive language, present tense, indicating writing knowledge and implying writing facility.

6. They were in touch with their audience. We had expected to find many audience references in all the protocols. To our surprise, we didn't. But these two writers made the most references to the audience and seemed to know their audience best. One said, "How you qualify...is of interest to people. so they'd want to know that first." There appeared to be least distance between these two writers and their audience.

7. They were the only writers to reread their revisions. One reread hers twice; the other reread his once and then reread the original regulation to be sure he hadn't left out anything important.

What the Poorer Writers Did

In contrast to the better writers, the poorer writers didn't realize the needs of their audience. They felt that the regulation itself, or something close to it, could be understood by "anyone with a high school degree." Our eight judges, all

college graduates, clearly disagreed, giving revisions of the poorer writers and the regulation itself very low ratings for understandability. The fact that the poorer writers themselves misunderstood important aspects of the regulation underlines this point. Moreover, they interpreted our instructions in a very narrow sense when a broad interpretation was clearly called for. In short, the poor writers seemed not to understand the task in the way the good writers did.

The Trouble with Regulations and Regulation Writing

Once Congress passes a law, known as a statute, a regulation is written to implement it. That regulation is published in the Federal Register and becomes part of the U.S. Code of Federal Regulations. It carries the power of law in that it is used by lawyers and policy makers in court cases and for reference.

From discussions with regulation writers, we found that a regulation is written in sections by committees. No one writer ever writes a regulation from beginning to end. Under these circumstances, it is surprising there is any cohesion at all. Once the regulation is pieced together, it may pass through 25 to 30 hands for revision, from the lower levels of an agency to the top. And it is not as though those at the top level are anxiously awaiting the arrival of clear, simplified documents complete with graphics. As one writer put it, "The old heads that review regs...don't recognize [a clearly written document]"

as a reg." When a regulation is completed, other committees within the originating agency use it to write the Standard Operating Procedures (SOPs) which are used by agency workers for reference in field offices.

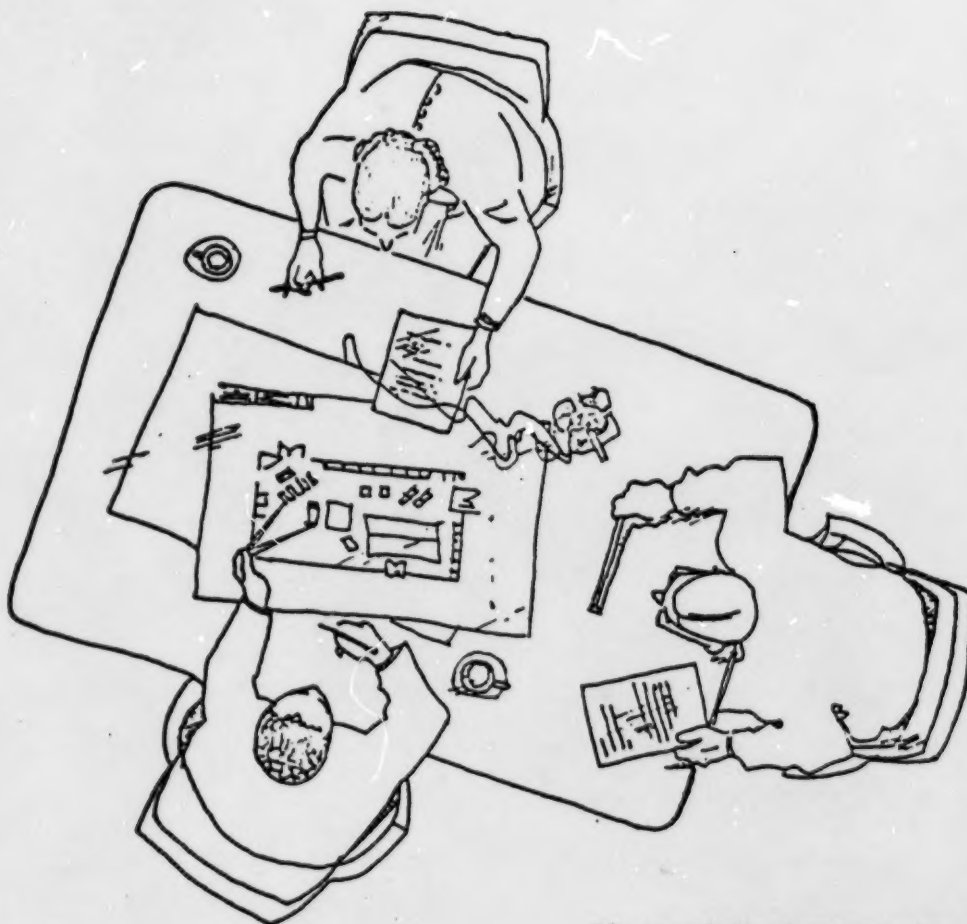
Once the SOPs are written, yet another group writes what is intended for that segment of the general public to whom the regulation applies--in this case, disadvantaged small business owners. Figure 4 is an excerpt from the SBA pamphlet intended for this audience.

This whole procedure strikes us as less than optimal. If the purpose of this entire process is to inform minority business people, we believe that goal has not been met on any level. But worse, it is also obvious to us that we are dealing here with something far beyond a mere writing problem. We are dealing with the entire bureaucratic structure of the federal government. We are optimistic that our results might have some impact on those who write the law, but obviously the problem goes beyond just rewriting. Changes within the system--for example, in the review process--will have to go along with changes in writing.

Guidelines for Revising

As a result of this study and previous work by Hayes and Flower (1977, 1979), we offer the following tentative guidelines for people facing a revision task:

1. Revision is inclusive. As such, it should be broad in



STEP 3

AFTER THE BUSINESS PLAN – THEN WHAT?

1. *Submit your plan to the nearest SBA office.*
2. *The regional or district director will approve or disapprove your business plan for program participation and will advise you by letter of approval or reasons for disapproval.*

If your business plan and program participation is approved, as the procurement item(s) required by your business plan are identified and secured from other Federal agencies, you will be given instructions for preparing a proposal so that SBA may negotiate in your behalf with other Federal agencies.

4

After negotiation of a suitable prime contract with the procuring agency, SBA will then subcontract performance to your firm. Thereafter, SBA will try to locate additional subcontracting opportunities necessary to fulfill the 8(a) contractual support projected in your firm's business plan. You must actively market your concern's regular products or services commercially at the same time.

Participation in the 8(a) program ceases when the objectives and terms of the business plan are fulfilled or SBA determines the objectives are unattainable because the Agency can not provide the necessary subcontracting support needed to make your business progress as projected in the business plan.

5

Figure 4: An Excerpt from the SBA Pamphlet Intended for Disadvantaged Business People.

scope and a vital part of the writing process. It should not be an afterthought. It should include not just appropriate syntax, grammar, and punctuation, but the generation and organization of material as well.

2. Attention to the audience is of major importance. A good reviser knows the intended audience, what that audience needs to know and can understand, and how to present it in a way that is interesting and will meet their purpose. Hayes and Flower (1979) have shown that poor writers either do not pay attention to their audience at all or cannot make necessary adjustments in their writings for their particular audience.

3. Revisions should be evaluated. How can a reviser know what the audience will read and understand? Ask them. A document which will be read by many people should be tested for clarity, interest, and understanding by members of the group for whom it is intended. This is probably the best way to determine what should be said and how.

4. Good revisions need good structure as well as good content. Headings, margins, indentations, typeface, and spacing can all be used to help make a document readable.

5. Examples can help. Current studies on instantiation (e.g., Pollchik, 1975) demonstrate that understanding increases with the use of examples inserted in the text, even though as a result the revised document may be longer than the original.

6. An imposed format can help or hinder. A familiar format can help us to locate information within a document. But if that information is disorganized, redundant, and does not match given headings, the result may well be confusion rather than clarity.

7. A good revision strategy involves reading and rereading. Our best revisions were produced by writers who read the original document completely through before beginning to revise, and who also reread their revisions completely through.

8. Only what needs to be said should be said. Tradition has held that everything be included in a document (Redish, 1979). But, in most cases, if it tells the audience in a clear way:

Who it is for (and who it is not for);
The obligations of those it is for;
What they can get and how to get it;

it probably says enough.

Conclusions

Revising is a process which combines some knowledge about what is being revised with reading, understanding, and writing skills. Our most encouraging finding is that, when instructed to revise without limitations, most of our writers were able to produce a more understandable document for the general public.

Still, some writers, even with prompting, interpreted our instructions in only the narrowest, most localized sense. Other writers made broader changes, but their efforts fell below the quality of the best revisions. There appears to be some room for improvement, possibly through instruction of the type offered by American Institutes for Research (AIR) workshops, in which writers learn to apply experimentally tested techniques to make their writing more understandable and the task of revising easier.

For most of us, revising remains an afterthought to the writing process, something we were always told to do, but never taught how to do. By using the guidelines we have suggested and expanding on them through further research, we are hopeful that revision will become a vital part of the writing process, and that as a result documents which are obscure and jargon-laden can be transformed into informative, understandable language for us all.

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